

April 13, 2016

Tom Moe
USS Corporation
P.O. Box 417
Mountain Iron, MN 55768

RE: Project: NPDES-LINE 3 Wk1
Pace Project No.: 1263670

Dear Tom Moe:

Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Melisa M Woods
melisa.woods@pacelabs.com
Project Manager

Enclosures

cc: Terri Sabetti, NTS



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: NPDES-LINE 3 Wk1

Pace Project No.: 1263670

Virginia Minnesota Certification ID's

315 Chestnut Street, Virginia, MN 55792

Alaska Certification #MN01084

Arizona Department of Health Certification #AZ0785

Minnesota Dept of Health Certification #: 027-137-445

North Dakota Certification: # R-203

Wisconsin DNR Certification # : 998027470

WA Department of Ecology Lab ID# C1007

Nevada DNR #MN010842015-1

Oklahoma Department of Environmental Quality

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SAMPLE SUMMARY

Project: NPDES-LINE 3 Wk1

Pace Project No.: 1263670

Lab ID	Sample ID	Matrix	Date Collected	Date Received
1263670001	WS-003 Thickner Overflow	Water	04/06/16 08:30	04/06/16 13:50
1263670002	WS-002 Scrubber Make-Up	Water	04/06/16 08:40	04/06/16 13:50
1263670003	WS-003 Thickner Overflow	Water	04/06/16 08:30	04/06/16 13:50

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SAMPLE ANALYTE COUNT

Project: NPDES-LINE 3 Wk1

Pace Project No.: 1263670

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
1263670001	WS-003 Thickner Overflow	EPA 300.0	CSD	2	PASI-V
1263670002	WS-002 Scrubber Make-Up	EPA 200.7	MAR	3	PASI-V
		EPA 300.0	CSD	1	PASI-V
1263670003	WS-003 Thickner Overflow	EPA 200.7	MAR	3	PASI-V
		EPA 300.0	CSD	1	PASI-V

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ANALYTICAL RESULTS

Project: NPDES-LINE 3 Wk1

Pace Project No.: 1263670

Sample: WS-003 Thickner Overflow Lab ID: 1263670001 Collected: 04/06/16 08:30 Received: 04/06/16 13:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Chloride	544	mg/L	5.0	2.5	5		04/08/16 04:04	16887-00-6	
Fluoride	6.7	mg/L	0.50	0.12	5		04/08/16 04:04	16984-48-8	

Sample: WS-002 Scrubber Make-Up Lab ID: 1263670002 Collected: 04/06/16 08:40 Received: 04/06/16 13:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Lab Filtered Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Calcium, Dissolved	103	mg/L	5.0	0.29	10	04/07/16 17:00	04/13/16 13:25	7440-70-2	
Magnesium, Dissolved	206	mg/L	5.0	0.67	10	04/07/16 17:00	04/13/16 13:25	7439-95-4	
Total Hardness, Dissolved	1110	mg/L	100	50.0	10	04/07/16 17:00	04/13/16 13:25		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Sulfate	729	mg/L	20.0	0.89	10		04/08/16 04:24	14808-79-8	

Sample: WS-003 Thickner Overflow Lab ID: 1263670003 Collected: 04/06/16 08:30 Received: 04/06/16 13:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
200.7 MET ICP, Lab Filtered Analytical Method: EPA 200.7 Preparation Method: EPA 200.7									
Calcium, Dissolved	985	mg/L	5.0	0.29	10	04/07/16 17:00	04/13/16 13:28	7440-70-2	
Magnesium, Dissolved	ND	mg/L	5.0	0.67	10	04/07/16 17:00	04/13/16 13:28	7439-95-4	
Total Hardness, Dissolved	2470	mg/L	100	50.0	10	04/07/16 17:00	04/13/16 13:28		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0									
Sulfate	1680	mg/L	40.0	1.8	20		04/08/16 04:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NPDES-LINE 3 Wk1

Pace Project No.: 1263670

QC Batch: MPRP/6701

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 MET Dissolved

Associated Lab Samples: 1263670002, 1263670003

METHOD BLANK: 304071

Matrix: Water

Associated Lab Samples: 1263670002, 1263670003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium, Dissolved	mg/L	ND	0.50	0.029	04/13/16 12:44	
Magnesium, Dissolved	mg/L	ND	0.50	0.067	04/13/16 12:44	

LABORATORY CONTROL SAMPLE: 304072

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium, Dissolved	mg/L	50	50.5	101	85-115	
Magnesium, Dissolved	mg/L	50	50.7	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 304073

304074

Parameter	Units	1263740001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium, Dissolved	mg/L	131	50	50	178	179	94	95	70-130	0	20	
Magnesium, Dissolved	mg/L	94.3	50	50	145	145	101	101	70-130	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: NPDES-LINE 3 Wk1

Pace Project No.: 1263670

QC Batch: WETA/16211 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 1263670001, 1263670002, 1263670003

METHOD BLANK: 303898 Matrix: Water

Associated Lab Samples: 1263670001, 1263670002, 1263670003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	04/07/16 21:08	
Fluoride	mg/L	ND	0.10	0.024	04/07/16 21:08	
Sulfate	mg/L	ND	2.0	0.089	04/07/16 21:08	

LABORATORY CONTROL SAMPLE: 303899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	5	5.0	101	90-110	
Sulfate	mg/L	50	49.6	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 303900 303901

Parameter	Units	1263656001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	112	250	250	379	378	107	106	90-110	0	20	
Fluoride	mg/L	<0.50	25	25	27.2	27.2	109	109	90-110	0	20	
Sulfate	mg/L	27.3	250	250	291	290	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 303902 303903

Parameter	Units	1263575002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	657	250	250	921	919	106	105	90-110	0	20	
Fluoride	mg/L	ND	25	25	26.6	26.5	105	105	90-110	0	20	
Sulfate	mg/L	21.1	250	250	285	285	106	105	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: NPDES-LINE 3 Wk1

Pace Project No.: 1263670

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-V Pace Analytical Services - Virginia

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPDES-LINE 3 Wk1

Pace Project No.: 1263670

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
1263670002	WS-002 Scrubber Make-Up	EPA 200.7	MPRP/6701	EPA 200.7	ICP/5069
1263670003	WS-003 Thickner Overflow	EPA 200.7	MPRP/6701	EPA 200.7	ICP/5069
1263670001	WS-003 Thickner Overflow	EPA 300.0	WETA/16211		
1263670002	WS-002 Scrubber Make-Up	EPA 300.0	WETA/16211		
1263670003	WS-003 Thickner Overflow	EPA 300.0	WETA/16211		

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Section C

Invoice Information:

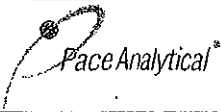
MO#: 12636/W Due Date:

PM: MMW
Due Date: 04/20/20

CLIENT: USS CORP

[illegible]

PRINT Name of SAMPLER:	<i>Paula Smith</i>	TEMP in C	
SIGNATURE OF SAMPLER:	<i>Paula Smith</i>	Received on Ice (Y/N)	
		Custody Sealed Cooler (Y/N)	
		Samples Intact (Y/N)	
	DATE Signed:		
	<i>4-6-16</i>		

	Document Name:	Document Revised: 23Feb2015
	Sample Condition Upon Receipt Form	Page 1 of 1
	Document No.: F-VM-C-001-Rev.09	Issuing Authority: Pace Virginia, Minnesota Quality Office

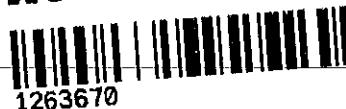
Sample Condition Upon Receipt

Client Name:

Project #:

VSS

WO#: 1263670



Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client
☐ Commercial ☐ Pace ☐ Other: _____

Tracking Number: _____

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No

Seals Intact? ☐ Yes ☒ No

Optional: Proj. Due Date: _____ Proj. Name: _____

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other: _____

Temp Blank? ☒ Yes ☐ No

Thermometer Used: ☒ 140792808

Type of Ice: ☒ Wet ☐ Blue ☐ None ☒ Samples on ice, cooling process has begun

Cooler Temp Read °C: 3.4

Cooler Temp Corrected °C: 3.7

Biological Tissue Frozen? ☐ Yes ☐ No ☒ NA

Temp should be above freezing to 6°C

Correction Factor: 0.3

Date and Initials of Person Examining Contents: 4-6-16 CR

Comments:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name and Signature on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved containers.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes Date/Time/ID/Analysis Matrix: <u>WT</u>		
All containers needing acid/base preservation will be checked and documented in the pH logbook.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Headspace in VOA Vials (>6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____

FECAL WAIVER ON FILE Y N

TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: KAH for mmw

Date: 4-7-16

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHHA Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)